

AMENDMENTS TO THE DRAWINGS

Applicant respectfully submits the attached proposed amendments to Figures 1, 4, 9 and 13 and respectfully requests the Examiner's approval of the proposed amendments to the drawings.

REMARKS

In response to the above-identified Office Action, Applicant traverses the Examiner's rejection to the claims and seeks reconsideration thereof. Claims 1-6 are now pending in the present application. In this response, Claims 1-2 and 4-6 have been amended, no claims have been added and no claims have been cancelled.

Amendments to the Claims

Applicant respectfully submits the attached Amendments to the Claims in which Claims 1-2 and 4-6 have been amended. In particular, Claim 1 has been amended to clarify that the low-power controller generates "the enable signal according to a performance of the self-refresh operation during the self-refresh mode, wherein the enable signal is activated when the self-refresh operation is performed and is inactivated when the self-refresh operation is not performed." Similarly, Claim 6 has been amended to clarify that "during the self-refresh mode, wherein a high voltage and a low voltage are generated when the self-refresh operation is performed and are not generated when the self-refresh operation is not performed." Support for the amendments to Claims 1 and 6 may be found, for example, in Figs. 5 and 6 and on pages 10-12 of the Application. The remaining amendments to dependent Claims 2, 4 and 5 are submitted to provide consistency between Claims 2, 4 and 5 and the above-referenced amendments to Claim 1. Since, the attached Amendments to the Claims are supported by the Specification and do not add new matter, entry is respectfully requested.

Drawing Objections

In paragraph 1 of the outstanding Office Action, the Examiner objects to the drawings under 37 CFR §1.84(p)(5) because they include the reference characters not mentioned in the description, namely, “selfref com” in Fig. 1 Prior Art; “selfref com” and “300” in Fig. 4; “D1” and “C” in Fig. 9; all elements in Fig. 11; “WL enable” in Fig. 13; “BISH1”, “BISL1” and “59” in Fig. 14. Applicant respectfully submits the attached proposed amendments to Figures 1, 4, 9 and 13 in which reference character “selfref com” has been deleted from Fig. 1 Prior Art, “selfref com” has been amended to recite “selfcom” in Fig. 4, “C” has been deleted from Fig. 9 and “WL enable” has been deleted from Fig. 13. In regard to the remaining objections raised by the Examiner, Applicant respectfully submits the attached Amendments to the Specification in which characters “300”, “D1”, “IN11 to IN20”, “BISH1”, BISL1”, and “59” have been added to the specification.

In paragraph 2 of the outstanding Office Action, the Examiner objects to the drawings as failing to comply with 37 CFR 1.84(p)(5) because they do not include reference signs “ck”, “selfcom”; and “ck” mentioned in the description. Applicant respectfully submits the attached proposed amendments to the drawings in which reference signs “ck” and “selfcom” have been added to Fig. 4, and “ck” has been added to Fig. 1 Prior Art.

Applicant respectfully submits the proposed amendments comply with 37 CFR §1.121(d) and requests approval of the proposed amendments to the drawings and withdrawal of the objection to the drawings.

Amendments to the Specification

Applicant respectfully submits the attached Amendments to the Specification in which characters “300”, “D1, “IN11 to IN20”, “BISH1”, BISL1”, and “59” have been added in response to the Examiner’s objections to the drawings on the basis Figs. 1, 4, 9, 11, 13 and 14 recite characters not mentioned in the description. Applicant respectfully submits support for the above-referenced amendments is found in Figs. 4, 9, 11 and 14. Applicant respectfully submits the amendments to the Specification are in compliance with 37 CFR §1.121(b). For the foregoing reasons, Applicant respectfully requests entry of the Amendments to the Specification and withdrawal of the objections to the drawings.

Claim Rejections – 35 U.S.C. §112, second paragraph

In the outstanding Office Action, the Examiner rejects Claim 1 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. Specifically, the Examiner objects to the phrase “used in an internal circuit by using an external supply voltage and a ground voltage” as recited in lines 8-10 of Claim 1. Applicant respectfully submits the attached Amendments to the Claims wherein Claim

1 has been amended to recite “ a power supply means for generating a low and a high voltages, which are used in an internal circuit, according to an enable signal by using an external supply voltage and a ground voltage.” For the foregoing reasons, Applicant respectfully requests withdrawal of the rejection of Claim 1 under 35 U.S.C. §112, second paragraph.

Claim Rejections – 35 U.S.C. §102(b)

In the outstanding Office Action, Claims 1-3 and 6 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,563,746 issued to Fujioka et. al. (“Fujioka”).

It is axiomatic that to anticipate a claim, every element of the claim must be disclosed within a single reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Furthermore, the reference must disclose the identical invention in as complete detail as is found in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The present invention claims a memory device, and corresponding method, for performing at least one self refresh operation during a self-refresh mode, comprising, a power supply means for generating a low and a high voltages, which are used in an internal circuit, according to an enable signal by using an external supply voltage and a ground voltage, and a low-power controller for generating the enable signal according to a performance of the self-refresh operation during the self-refresh mode, wherein the enable signal is activated when the self-refresh operation is performed and is

inactivated when the self-refresh operation is not performed and wherein the low voltage is lower than the ground voltage and the high voltage is higher than the external supply voltage.

In regard to independent Claim 1, Applicant respectfully submits Fujioka fails to teach or suggest all the elements recited in amended Claims 1. As recited in Claims 1, the high voltage and the low voltage are generated according to the performance of the self-refresh operation during the self-refresh mode. That is, since the self-refresh operation is performed at least once during the self-refresh mode, the high and the low voltages are generated when the self-refresh operation is performed and are not generated when the self-refresh operation is not performed to thereby reduce the power consumption at the self-refresh mode. Applicant has been unable to discern, and the Examiner has failed to point to any portion of Fujioka where the element of generating the high and the low voltages according to the performance of the self-refresh operation during the self-refresh mode is taught or suggested. Instead, Fujioka disables the internal voltage generator at the low power consumption mode to thereby reduce the power consumption at the low power consumption mode. Moreover, it should be noted that Fujioka controls the high and the low voltage at the low power consumption mode while the present invention controls the high and the low voltages at the self-refresh mode. Accordingly, since Fujioka does not teach all the elements of Claim 1, anticipation may not be found. For the foregoing reasons, Applicant respectfully traverses the Examiner's rejection of Claim 1 and requests withdrawal of the rejection of Claim 1 under 35 U.S.C. §102(e).

In regard to dependent Claims 2 and 3, Applicant respectfully submits these claims depend from Claim 1 and incorporate the limitations thereof. Thus, for at least the reasons discussed above with respect to Claim 1, Fujioka does not teach or suggest all the elements of Claims 2 and 3. Since Fujioka does not teach all the elements of Claims 2 and 3, anticipation may not be found. For the foregoing reasons, Applicant respectfully requests withdrawal of the rejection of Claims 2 and 3 under 35 U.S.C. §102(e).

In regards to independent Claim 6, amended Claim 6 recites a method of operating the memory device. The method comprises entering into a self-refresh mode, and performing at least one self-refresh operation during the self-refresh mode, wherein a high voltage and a low voltage are generated when the self-refresh operation is performed and are not generated when the self-refresh operation is not performed, wherein the high voltage is higher than an external power supply voltage and the lower voltage is lower than a ground voltage. Thus, similar to Claim 1, the high voltage and the low voltage are generated according to the performance of the self-refresh operation during the self-refresh mode. Since the self-refresh operation is performed at least once during the self-refresh mode, the high and the low voltages are generated when the self-refresh operation is performed and are not generated when the self-refresh operation is not performed to thereby reduce the power consumption at the self-refresh mode. As previously discussed with respect to Claim 1, Fujioka fails to teach or suggest at least the element of generating the high and the low voltages according to the performance of the self-refresh operation during the self-refresh mode. Thus, since Fujioka fails to

teach or suggest all the elements of Claim 6, anticipation may not be found. For the foregoing reasons, Applicant respectfully requests withdrawal of the rejection of Claim 6 under 35 U.S.C. §102(e).

Allowable Subject Matter

Applicant respectfully acknowledges the Examiner's recognition that Claims 4 and 5 would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Applicant respectfully submits, however, for the reasons discussed above with respect to Claim 1, Claims 4 and 5 are allowable without rewriting them in the manner suggested by the Examiner. As previously discussed, Fujioka fails to teach or suggest all the elements of Claim 1. Claims 4 and 5 depend from Claim 1 and incorporate the limitations thereof. Thus, for the reasons discussed above with respect to Claim 1, Fujioka fails to teach or suggest all the elements of amended Claims 4 and 5. Since all the elements of Claims 4 and 5 are not taught by Fujioka, anticipation may not be found. For the foregoing reasons, Applicant respectfully requests allowance of Claims 4 and 5.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending, namely Claims 1-6, are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666.

Questions regarding this matter should be directed to the undersigned at (310) 207-3800.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR, & ZAFMAN LLP

Dated: 3/9/05

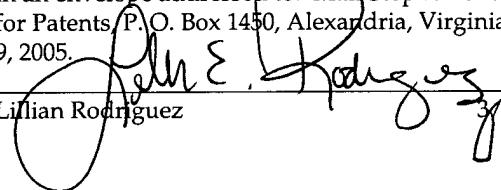
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail with sufficient postage in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on March 9, 2005.


Lillian Rodriguez

3/9/2005

FIG. 1
(PRIOR ART)

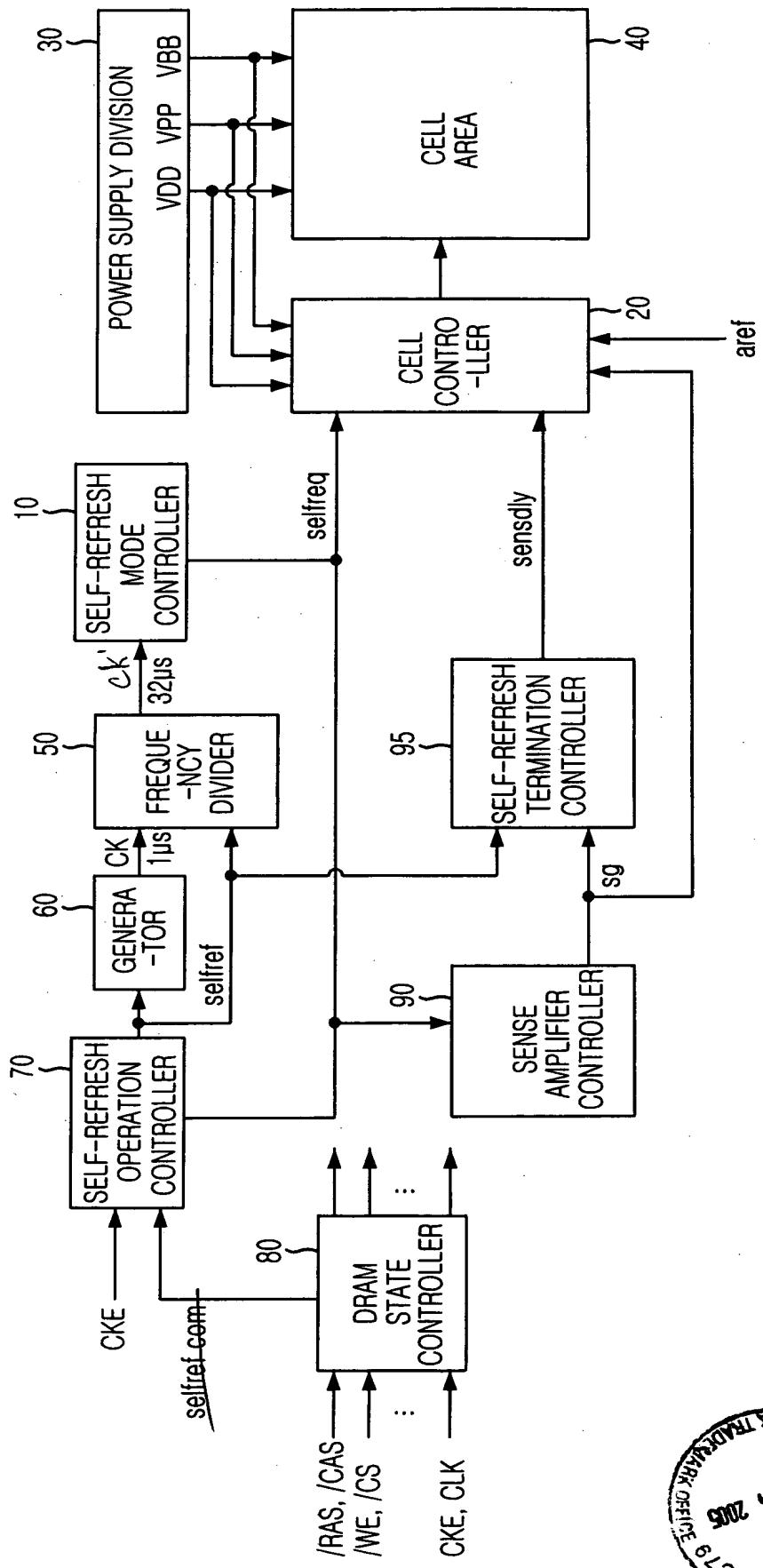


FIG. 4

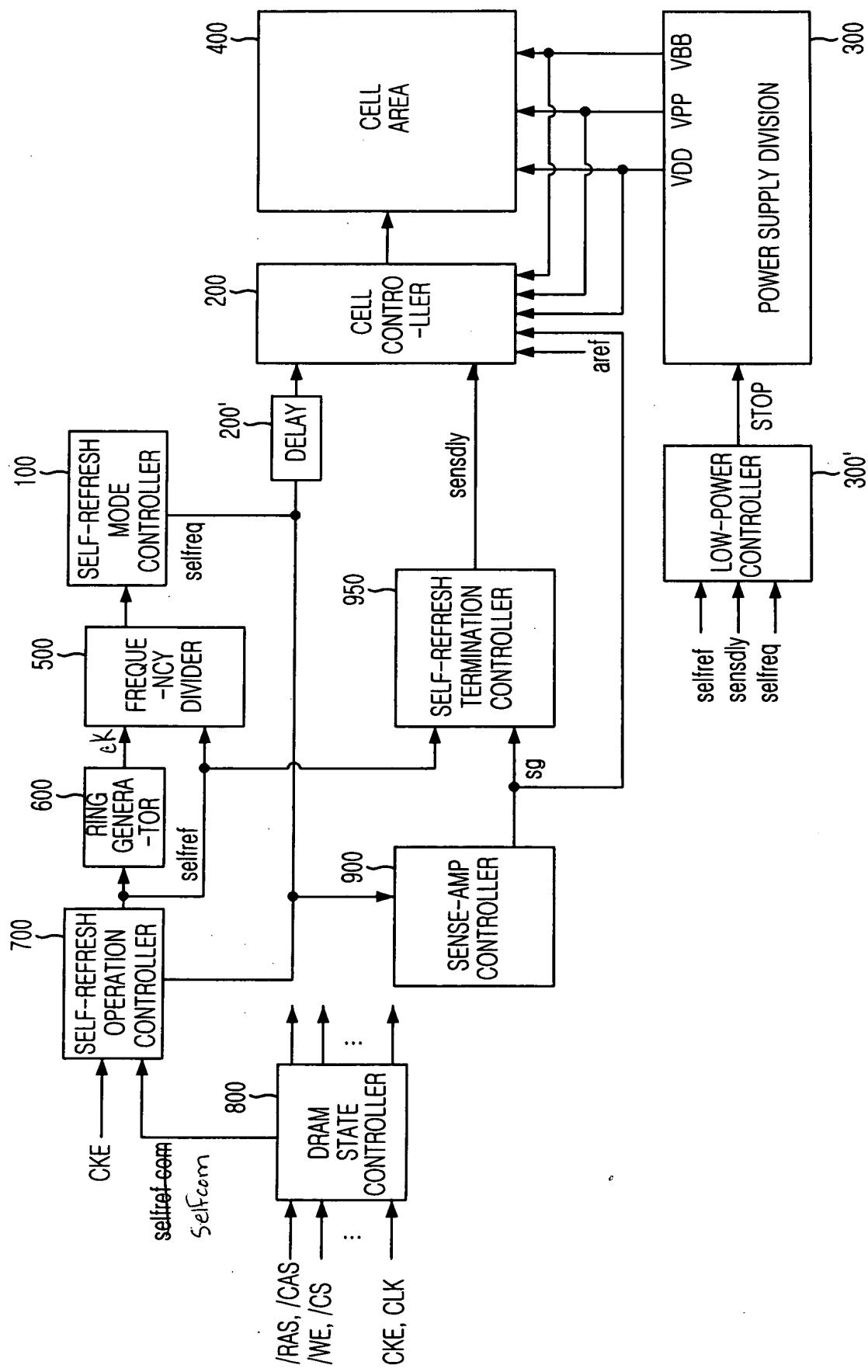


FIG. 9

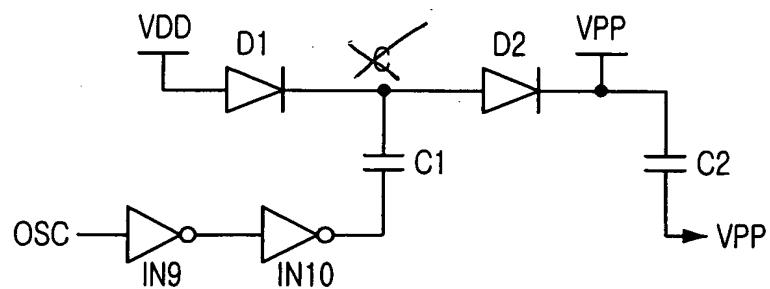


FIG. 10

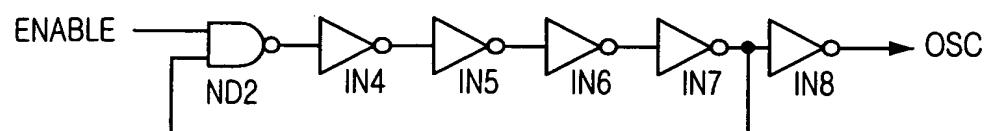


FIG. 13

